

IN THE CLAIMS

Please cancel claims 12-34 as originally filed without prejudice. Please amend the remaining claims as follows, substituting any amended claim(s) for the corresponding pending claim(s):

1. (amended) A fabrication method, comprising the steps of:
 - forming a dielectric structure over a contact region, the dielectric structure comprising:
 - a first layer formed from a first material; and
 - a second layer overlying the first layer and formed from a second material which may be selectively etched with respect to the first material;
 - forming and patterning a resist layer over the dielectric structure;
 - selectively etching the second layer through an opening through the patterned resist layer utilizing an etch which is selective of the first material over the second material; and
 - without stripping the resist layer, etching the dielectric structure through the opening within the patterned resist layer and any etched region within the second layer to form a contact opening extending through the dielectric structure and exposing the contact region.

Please add the following new claims:

A2 1 ~~2~~³⁵. (newly added) The method of claim 1, wherein the step of forming a dielectric structure
 2 over a contact region further comprises:
 3 forming a third layer underlying the first layer and formed from a material different than
 4 the first material.

3 1 ~~36~~². (newly added) The method of claim ~~35~~², wherein the step of forming a dielectric structure
 2 over a contact region further comprises:
 3 forming a third layer from a silicate glass doped with a gettering agent;
 4 forming the first layer of silicon nitride; and
 5 forming the second layer of borophosphosilicate glass.

4 1 ~~37~~⁴. (newly added) The method of claim 1, wherein the step of selectively etching the second
 2 layer through an opening through the patterned resist layer utilizing an etch which is selective
 3 of the first material over the second material further comprises:
 4 etching an opening through the second layer.

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38. (newly added) The method of claim 37, wherein the step of etching an opening through the
second layer further comprises:
utilizing a relatively isotropic etch process to etch the opening through the second layer,
wherein the opening through the second layer undercuts the patterned resist layer.

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39. (newly added) The method of claim 37, wherein the step of etching an opening through the
second layer further comprises:
utilizing a wet etch process to etch the opening through the second layer.

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40. (newly added) The method of claim 37, wherein the step of etching the dielectric structure
through the opening within the patterned resist layer and any etched region within the second
layer to form a contact opening extending through the dielectric structure and exposing the
contact region further comprises:
utilizing a relatively anisotropic etch process to etch a remainder of the opening
extending through the dielectric structure through the opening within the patterned resist layer.

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1. (newly added) The method of claim 3~~7~~⁴, wherein the step of etching the dielectric structure
through the opening within the patterned resist layer and any etched region within the second
layer to form a contact opening extending through the dielectric structure and exposing the
contact region further comprises:
utilizing a plasma etch process to etch a remainder of the opening extending through the
dielectric structure through the opening within the patterned resist layer, the patterned resist
layer masking the plasma etch process.

1 42. (newly added) An intermediate integrated circuit structure, comprising:
2 a substrate including a contact region;
3 a dielectric structure over the substrate, the dielectric structure comprising:
4 a first layer formed from a first material; and
5 a second layer overlying the first layer and formed from a second material which
6 may be selectively etched with respect to the first material;
7 an opening through the dielectric structure and exposing the contact region, the opening
8 including
9 a first portion extending through the second layer having sloped or concave
10 sidewalls, and
11 a second portion extending through the first layer and having substantially
12 vertical sidewalls; and
13 a patterned resist layer overlying the dielectric structure, the patterned resist layer having
14 an opening therethrough over the opening through the dielectric structure.

1 10/ 43. (newly added) The intermediate integrated circuit structure of claim 42, wherein the
2 dielectric structure further comprises:
3 a third layer underlying the first layer and formed from a material different than the first
4 material.

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1 ~~44~~. (newly added) The intermediate integrated circuit structure of claim ~~43~~¹⁰, wherein the first
2 layer is formed of silicon nitride, the second layer is formed of borophosphosilicate glass, and
3 the third layer is formed of a silicate glass doped with a gettering agent.

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1 ~~45~~. (newly added) The intermediate integrated circuit structure of claim ~~43~~¹⁰, wherein the first
2 portion of the opening through the dielectric structure undercuts the patterned resist layer.

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1 ~~46~~. (newly added) The intermediate integrated circuit structure of claim ~~43~~¹⁰, wherein the
2 opening through the dielectric structure has a Y-shaped profile.

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1 ~~47~~. (newly added) The intermediate integrated circuit structure of claim ~~43~~¹⁰, wherein the
2 opening through the dielectric structure is wider within the first portion than the opening through
3 the patterned resist layer.

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1 ~~48~~. (newly added) The intermediate integrated circuit structure of claim ~~43~~¹⁰, wherein the
2 opening through the dielectric structure has a width within the second portion approximately
3 equal to a width of the opening through the patterned resist layer.

1 ~~49.~~ (newly added) A method of forming a contact opening, comprising:
2 forming a dielectric structure over a contact region, the dielectric structure comprising:
3 a first layer formed from a first material; and
4 a second layer overlying the first layer and formed from a second material which
5 may be selectively etched with respect to the first material;
6 forming and patterning a resist layer over the dielectric structure;
7 selectively etching the second layer through an opening through the patterned resist layer
8 utilizing a relatively isotropic etch process which is selective of the first material over the
9 second material and which undercuts the patterned resist layer in an etched region formed by
10 the relatively isotropic etch process; and
11 without stripping the resist layer, etching the dielectric structure, utilizing a relatively
12 anisotropic etch process, through the opening within the patterned resist layer and the etched
13 region within the second layer to form a contact opening extending through the dielectric
14 structure and exposing the contact region.

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1 50. (newly added) The method of claim ~~49~~¹⁶, wherein the step of selectively etching the second
2 layer through an opening through the patterned resist layer utilizing a relatively isotropic etch
3 process which is selective of the first material over the second material and which undercuts the
4 patterned resist layer in an etched region formed by the relatively isotropic etch process further
5 comprises:

6 etching an opening through the second layer utilizing the first layer as an etch stop.

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1 51. (newly added) The method of claim ~~50~~¹⁷, wherein the step of selectively etching the second
2 layer through an opening through the patterned resist layer utilizing a relatively isotropic etch
3 process which is selective of the first material over the second material and which undercuts the
4 patterned resist layer in an etched region formed by the relatively isotropic etch process further
5 comprises:

6 wet etching the opening through the second layer utilizing hydrofluoric acid, wherein the
7 second layer is formed of a borophosphosilicate glass.

1 ~~19~~ 52. (newly added) The method of claim ~~50~~ 17, wherein the step of etching the dielectric structure,
2 utilizing a relatively anisotropic etch process, through the opening within the patterned resist
3 layer and the etched region within the second layer to form a contact opening extending through
4 the dielectric structure and exposing the contact region further comprises:

5 plasma etching a remainder of the opening through the dielectric structure through the
6 opening through the patterned resist layer and through the opening through the second layer.

1 ~~20~~ 53. (newly added) The method of claim ~~52~~ 19, wherein the step of plasma etching a remainder
2 of the opening through the dielectric structure through the opening through the patterned resist
3 layer and through the opening through the second layer further comprises:
4 masking the plasma etching process with the patterned resist layer.